REMARK

Applicant respectfully requests reconsideration of this application as amended. Claims 1-50 remain in the application. Claim 17 has been amended. No claims have been canceled or added.

Corrected Drawings

The Examiner required new corrected drawings because of the Draftperson's review. In response, Applicant is submitting a new set of correct drawings for Figures 1-3.

Information Disclosure Statement

The Examiner requested copies of references filed with application. In response, Applicant is submitting the missing references.

Rejections under 35 U.S.C. § 103(a)

Applicant's claims 1-4, 7, 8, 12-19, 23, 25, 32-43, 48 and 50 have been rejected under 103(a) as being obvious over Vogler, "An Approach for Mobile Agent Security and Fault Tolerance using Distributed Transactons" in view of Venners, "Solve Real Problems with Aglets, a Type of Mobile Agent". Applicant respectfully submits that the combination does not teach each and every element of the invention as claimed in claims 1-4, 7, 8, 12-19, 23, 25, 32-43, 48 and 50.

Vogler discloses securely and reliably transferring mobile agents among hosts (Vogler, p. 268). A trust service generates a session key for the secure transfer of the mobile agent. The trust service sends the session key to the originator and target hosts. The originator host encrypts the mobile agent with the session and sends the encrypted mobile agent to the target host. The target host decrypts the mobile agent with the session key. Finally, the originator host initiates the 2PC protocol to conclude the transfer of mobile agent. Use of the 2PC protocol allows the transfer to be permanently visible (Vogler, p. 271). The 2PC protocol has the originator of the transaction collecting votes about the results of the transaction by target host. The originator transmits the results to the target host, where the target host either commits or rolls back the changes (Volger, p.269).

Venners discloses using mobile agents to solve real world problems (Venners, p.1). The mobile agents are autonomous, meaning once the mobile agents are started, the mobile agents decide where they will go and what they will do (Venners, p.1). Venners discloses an example of using mobile agents is to administer a parallel processing job (Venners, p.5). Because a mobile agent can spawn subagents, a mobile agent can administer a parallel processing job across multiple mobile agents hosts (Venners, p. 5). However, Venners only discloses using a mobile agent administering a parallel processing job with two sentences. As such, Venners does not disclose much detail of how a mobile agent administers a parallel processing job. For example, Venners does not disclose if the mobile agent utilizes a state machine while administering the parallel processing job. Furthermore, how the mobile agent communicates is undisclosed in Venners.

Applicant respectfully submits that the combination of <u>Vogler's secure and reliable transfer of mobile agents</u> with the <u>autonomous mobile agent of Venners</u> would not teach or suggest the Applicant's independent claims. The combination would have a mobile agent securely and reliably transferred among hosts to <u>administer a parallel processing job</u>. However, the combination does not teach or suggest coordinating multiple mobile agents, let alone the coordinating state machines of the mobile agents. Furthermore, this <u>combination does not disclose</u> using a <u>mobile agent state machine</u> <u>when administering the parallel processing job</u> nor <u>coordinating the state machine advance</u> among <u>numerous mobile agents</u>.

In contrast, Applicant's claims 1, 16 and 17 are directed to a coordinator transaction agent coordinating the operations of the state machines among each replicated transaction agent. Furthermore, claim 23 is directed towards instructing a plurality of transaction agents to altering the state of each transaction agent's state machine. Finally, claim 40 is directed towards a coordinator transaction agent coordinating a distributed sequence of transactions.

For example, in claim 1, Applicant claims "<u>coordinator transaction agent coordinating operations</u> of ... said <u>state machine</u> in <u>each</u> of said <u>replicated transaction agents</u> to implement <u>a</u> <u>distributed state machine</u>".

As another example, claim 16 requires "D) said <u>coordinator transaction agent</u> transmitting an indication for delivery to each of said replicated transaction agents <u>that instructs them to perform a currently selected step of said state machine</u> in their network element ... E) <u>coordinator transaction agent receiving from</u> each of said <u>replicated transaction agents an indication</u> of their completion of said currently selected step ... said <u>coordinator transaction</u>

agent selecting a next state as said <u>currently selected state of said state machine</u> and <u>repeating D and E</u> until a final state of said state machine is reached".

Furthermore, claim 17 requires "receiving <u>state advance communications</u> from said <u>coordinator transaction agent</u>, said replicated transaction agent in said network element causing the <u>performance of the next state of said state machine</u> ... <u>responsive</u> to said <u>replicated transaction agent</u> in said network element <u>detecting successful or unsuccessful completion of the current state</u> in its network element, <u>causing the transmission of an indication to said coordinator network element</u>".

As another example, claim 23 requires "instructing said <u>state machines of said plurality of transaction agents</u> to <u>alter state</u> upon <u>executing a set of transactions</u>".

Finally, claim 43 requires "<u>coordinator transaction agent</u> including, a state machine to <u>coordinate a distributed sequence of transactions</u> across a <u>plurality of network elements;</u>".

The above quoted limitations are not described or suggested by the combination. While there are various uses for the invention as claimed, several such uses are discussed at paragraphs 39-41, 46 and 49. Thus, while the invention is not limited to the uses discussed in these paragraphs, it should be understood that the combination of Vogler and Venner does not enable these uses and the above quoted limitations do.

For at least these reasons, Applicant respectfully submits that the independent claims are allowable. The Applicant respectfully submits that the dependant claims are allowable for at least the reason that they are dependent on an allowable independent claim.

Applicant's claims 5, 6, 9-11, 20-22, 24, 26-31, 44-47 and 49 have been rejected under 103(a) as being obvious over Vogler in view of Venners and Applicant's Admitted Prior Art

("APA"). Applicant respectfully submits that claims 5, 6, 9-11, 20-22, 24, 26-31, 44-47 and 49 are allowable for the reason state below and that these claims depend from independent claims 1, 17, 23 and 43.

The Examiner relies on Applicant's APA as disclosing the claim elements missing from the combination of Vogler and Venners. Applicant's APA discloses a user enabling and disabling cross connects over multiple network elements. The user manually enables cross connects one by one for each network element. If one of the cross connect creations fail, then the user must manually disable the other created cross connects to return the network elements to the previous state. Furthermore, the Examiner asserts that Venners discloses "mobile agents performing transactions regarding data collection, searching and filtering, monitoring, target information dissemination, negotiating, bartering, parallel processing and entertainment (Venners 3-5)". However, Venners does not disclose using mobile agents to enable and disable cross connects, circuit creation, software installation or otherwise administering network elements. Finally, neither Vogler nor Applicant's APA teaches or suggests using mobile agents to administer network elements.

Applicant respectfully submits that the combination of Vogler's secure and reliable transfer of mobile agents and Venners' autonomous mobile agent with the APA's user manually enabling and disabling cross connects does not teach or suggest Applicant's claims 5, 6, 9-11, 20-22, 24, 26-31, 44-47 and 49.

First, the Examiner does not mention that the combination teaches or suggests software installation, as claimed in Applicant's claims 25 and 45. For example, claims 25 and 45 require "wherein said set of transactions include transactions to install software" and "wherein said

sequence of transactions include transactions to install software", respectively. Therefore, the rejection is improper because the rejection does not address each and every element as claimed.

Second, Applicant objects to Examiner's Official Notice that "it is obvious and well-known in the art that a two phase commit protocol autonomously rolls back or indicates success in a lock step in order to complete a transaction" because the two phase commit protocol does not have the partners autonomously roll back unless the initiator instructs the other partners to roll back the transaction (Vogler, p. 269). Therefore, Applicant respectfully submits that the Examiner cite references in support of his position.

Finally, there is no section of Venners or Vogler that teaches or suggests that mobile agents can be used to administer network elements. Thus, the combination of the rejection is relying on hindsight because it is not obvious to combine Vogler, Venners and Applicant's APA. Evidence that hindsight is used by the Examiner is that the references do not teach or suggest using mobile agents for cross connect enabling/disabling, circuit creation, software installation or otherwise administer network elements.

On the other hand, Applicant's claims 5, 6, 9-11, 20-22, 24, 26-31, 44-47 and 49 are directed towards administering network elements. For example, claim 9 requires "operation of said distributed state machine causes the formation of a circuit through said plurality of network elements". Similarly, claim 10 requires "operation of said distributed state machine causes the destruction of a circuit through said plurality of network elements". Claim 11 requires "operation of said distributed state machine causes the labeling of a circuit cross connection through said plurality of network elements".

As another example, claim 20 requires "<u>replicated transaction agent invoking transactions</u> <u>to provision a cross connect</u>". Furthermore, claim 22 requires "wherein said invoking <u>transactions to provision a cross connect includes</u>: <u>disabling the facilities</u> to have said cross connect; <u>generating said cross connect</u> for said facilities; and <u>enabling said facilities</u>". Claim 24 and 44 require "<u>transactions to provision a circuit</u>", claim 26 requires "<u>transactions to label cross</u> <u>connects</u>" and claim 27 and 47 require "<u>transactions to un-provisioning a circuit</u>". Additionally, claim 46 requires "<u>transactions to label cross connects</u>".

The above quoted limitations are not described or suggested by the combination. While there are various uses for the invention as claimed, several such uses are discussed at paragraphs 39-52. Thus, while the invention is not limited to the uses discussed in these paragraphs, it should be understood that the combination of Vogler, Venner and Applicant's APA does not enable these uses and the above quoted limitations do.

Conclusion

Applicant respectfully submits that the rejections have been overcome by the amendments and remarks, and that the Claims as amended are now in condition for allowance. Accordingly, Applicant respectfully requests the rejections be withdrawn and the Claims as amended be allowed.

Invitation for a telephone interview

The Examiner is invited to call the undersigned at 408-720-8300 if there remains any issue with allowance of this case.
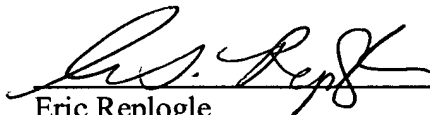
Charge our Deposit Account

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Date: _Feb. 1_ , 20_05_

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